DEPARTMENT OF ENVIRONMENTAL QUALITY

KATHLEEN BABINEAUX BLANCO
GOVERNOR

MIKE D. McDANIEL, Ph.D.
SECRETARY

Certified Mail No.

Agency Interest (AI) No. 687
Activity No. PER20060003

Robert Hicks
Director, Fossil Plant Operations
Entergy Services, LLC
Parkwood Two Bldg
10055 Grogans Mill Rd MU T-PKWD-4
The Woodlands, TX 77380

RE: Prevention of Significant Deterioration (PSD) Permit, Little Gypsy Generating Plant
Entergy Louisiana, LLC, Montz, St. Charles Parish, Louisiana

Dear Mr. Hicks:

Enclosed is your permit, PSD-LA-720. Construction of the proposed project is not allowed until such time as the corresponding Part 70 Operating Permit is issued.

Should you have any questions, contact Dustin Duhon of the Air Permits Division at (225) 219-3057.

Sincerely,

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c: US EPA Region VI

ENVIRONMENTAL **SERVICES**
: PO BOX 4313, BATON ROUGE, LA 70821-4313
P:225-219-3181 F:225-219-3309
WWW.DEQ.LOUISIANA.GOV

Agency Interest No. 687

PSD-LA-720

AUTHORIZATION TO CONSTRUCT AND OPERATE A MODIFIED MAJOR SOURCE PURSUANT TO THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS IN LOUISIANA ENVIRONMENTAL REGULATORY CODE, LAC 33:III.509

In accordance with the provisions of the Louisiana Environmental Regulatory Code, LAC 33:III.509,

Entergy Louisiana, LLC
17420 River Rd
Montz, LA 70068

is authorized to construct the Little Gypsy 3 Repowering Project at the Entergy Louisiana LLC - Little Gypsy Generating Plant near

17420 River Rd
Montz, LA 70068-9008

subject to the emissions limitations, monitoring requirements, and other conditions set forth hereinafter.

This permit and authorization to construct shall expire at midnight on _______________, 2009, unless physical on site construction has begun by such date, or binding agreements or contractual obligations to undertake a program of construction of the source are entered into by such date.

Signed this ________ day of _________________, 2007.

Chuck Carr Brown, Ph.D.
Assistant Secretary
Office of Environmental Services
Louisiana Department of Environmental Quality

BRIEFING SHEET

Little Gypsy Generating Plant
Agency Interest No.: 687
Entergy Louisiana, LLC
Montz, St. Charles Parish, Louisiana
PSD-LA-720

PURPOSE

To reduce the dependence on natural gas and to allow for the use of more economical fuels by installing two (2) circulating fluidized bed (CFB) boilers.

RECOMMENDATION

Approval of the proposed construction and issuance of a permit.

REVIEWING AGENCY

Louisiana Department of Environmental Quality, Office of Environmental Services, Air Permits Division

PROJECT DESCRIPTION

Entergy Louisiana, LLC proposes to construct and operate two circulating fluidized bed (CFB) boilers. They will be designed to burn petroleum coke and coal. In a CFB boiler, solid fuel and a sorbent (typically limestone) are jointly fed directly to the combustion chamber. Primary air is injected from the bottom of the combustion chamber to provide combustion air as well as to fluidize the burning bed. Fluidization of the bed allows for high heat transfer rates at relatively low combustion temperatures. Because of the turbulence and velocity in the circulating bed, the fuel mixes with the bed material quickly and uniformly. Secondary air is introduced at various levels to ensure solids circulation, provide staged combustion for NOx reduction as well as control of carbon monoxide (CO) and volatile organic compounds (VOCs), and supply air for continuous combustion in the upper part of the combustion chamber.

As fuel is added to the CFB boiler, it quickly heats above its ignition point, ignites and becomes part of the burning bed. The fuel particles are entrained within the bed until they are consumed or removed either in the gas stream or with the bed ash. Entrainment of the fuel particles in the gas stream occurs when their size is in the range where the terminal and gas velocities are equal. As the fuel particle size decreases to the point that the terminal velocity is exceeded by the gas velocity, the particles are blown from the bed, collected by a particle separator, and returned to the boiler.

BRIEFING SHEET

Little Gypsy Generating Plant
Agency Interest No.: 687
Entergy Louisiana, LLC
Montz, St. Charles Parish, Louisiana
PSD-LA-720

Estimated emissions, in tons per year, are as follows:

Pollutant	Baseline Actual Emissions	Projected Actual Emissions/PTE	Contemporaneous Changes	Net Emissions Increase	PSD de minimis	Review required?
PM	-	294.63	- 25	269.63	25	Yes
PM_{10}	-	294.63	- 25	269.63	15	Yes
SO_2	-	3,539	- 5.5	3,533.5	40	Yes
NO_X	-	1,404	- 3,433	- 2,029	40	No
CO	-	2,359	- 702	1,657	100	Yes
VOC	-	110.9	- 46	64.9	40	Yes
H_2SO_4	-	28.3	-	28.3	7	Yes
Lead	-	0.35	-	0.35	0.6	No
HF	-	19.7	-	19.7	3.0	Yes

The contemporaneous decreases represent the permanent decommissioning of the existing Unit 3 Boiler.

TYPE OF REVIEW

Particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), carbon monoxide (CO), volatile organic compound (VOC), sulfuric acid mist (H2SO4), and fluorides (HF) emissions from the proposed major modification will be above PSD significance levels. Therefore, the requested permit was reviewed in accordance with PSD regulations for PM/PM_{10}, SO_2, CO, VOC, H_2SO_4, and HF emissions. Emissions of LAC 33:III.Chapter 51-regulated toxic air pollutants (TAP) have been reviewed pursuant to the requirements of the Louisiana Air Quality Regulations.

BEST AVAILABLE CONTROL TECHNOLOGY

PM/PM_{10}, SO_2, CO, VOC, H_2SO_4, and HF emissions are above PSD significance levels and must undergo PSD analyses. The selection of control technology was based on the BACT analysis using a "top down" approach and included consideration of control of toxic materials.

Based on an RBLC search, circulating fluidized bed technology combined with a fabric filter are proposed as BACT for PM_{10} for the CFB Boilers. The proposed PM_{10} limit is 0.011 lb/MMBTU.

Based on an evaluation of standard control methods and the technical infeasibility of some control devices, wet suppression is proposed as BACT for PM_{10} for the Raw Material Handling Conveyors, Limestone Storage Pile, Petroleum Coke Storage Pile, Coal Storage Pile, as well as the various conveyor transfer points described as follows: Unloading Hopper to Barge Unloading Conveyor, Barge Unloading Conveyor to Unloading Transfer Conveyor, Unloading Transfer Conveyor to the Storage Container, Storage Container to Stacker Conveyor, Stacker Conveyor to Storage Piles, Petroleum Coke Reclaim from Storage Piles, and Coal/Limestone Reclaim from Storage Piles.

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Based on an evaluation of standard control methods, wind screens and wet suppression are proposed as BACT for PM_{10} for the Barge Unloader.

Based on an evaluation of standard control methods, a mix of paved roads and unpaved roads with dust suppressant applied is proposed as BACT for PM_{10} for Haul Road Fugitive Dust Emissions.

Based on an evaluation of standard control methods, a closed vent system that vents back into the ash silo is proposed as BACT for PM_{10} for the ash truck loading sources.

Based on an evaluation of standard control methods, a drift eliminator with a 99.999% control efficiency is proposed as BACT for PM_{10} for the cooling tower.

Based on an evaluation of standard control methods, fabric filters are proposed as BACT for PM_{10} for the Coke Reclaim Transfer Tower, Coal/Limestone Reclaim Transfer Tower, Diverter Transfer Tower, Activated Carbon Silo #1, Activated Carbon Silo #2, Bed Ash Silos, Lime Silo #1, Lime Silo #2, and Fly Ash Silos.

Based on an RBLC search, good combustion practices are proposed as BACT for CO for the CFB Boilers. The proposed CO limits are 0.10 lb/MMBTU when the boiler operates at greater than or equal to 60 percent of its maximum steam production output, and 0.15 lb/MMBTU when the boiler operates at less than 60 percent of its maximum steam production output.

Based on an RBLC search and the economic infeasibility of some control strategies, circulating fluidized bed technology combined with limestone injection and a flue gas desulfurization scrubber are proposed as BACT for SO_2 and sulfuric acid mist for the CFB Boilers. The proposed SO_2 limit is 0.15 lb/MMBTU; the proposed sulfuric acid mist limit is 0.0012 lb/MMBTU.

Based on an RBLC search, good combustion practices are proposed as BACT for VOC for the CFB Boilers. The proposed VOC limit is 0.0047 lb/MMBTU.

Based on an RBLC search and the economic infeasibility of some control strategies, circulating fluidized bed technology combined with limestone injection and a flue gas desulfurization scrubber are proposed as BACT for HF for the CFB Boilers. The proposed HF limit is 0.00084 lb/MMBTU.

AIR QUALITY IMPACT ANALYSIS

Prevention of Significant Deterioration regulations require an analysis of existing air quality for those pollutants emitted in significant amounts from a proposed major modification.

Industrial Source Complex, Short-Term, Version 3 (ISCST3) modeling indicates maximum ground level concentrations of CO are below the ambient significance levels and preconstruction monitoring exemption levels. Therefore, no preconstruction monitoring, or refined modeling is required for this pollutant.

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Industrial Source Complex, Short-Term, Version 3 (ISCST3) modeling indicates maximum ground level concentrations of PM_{10} and SO_2 are above the ambient significance levels, preconstruction monitoring, and PSD significance exemption levels. Therefore, preconstruction monitoring, refined modeling, and increment consumption analyses are required for these pollutants.

ADDITIONAL IMPACTS

Soils, vegetation, and visibility will not be adversely impacted by the proposed facility, nor will any Class I area be affected. The project will not result in any significant secondary growth effects. Approximately 57 new permanent jobs will be created.

PROCESSING TIME

Application Dated:	September 5, 2006
Application Received:	September 6, 2006
Additional Information Dated:	October 20, 2006 and December 12, 2006
Effective Completeness Date:	February 26, 2007

PUBLIC NOTICE

A notice requesting public comment on the proposed project was published in *The Advocate*, Baton Rouge, Louisiana, on <<Date>>, 2007; and in *<<Local Paper>>*, <<City>>, Louisiana, on <<Date>>, 2007. Copies of the public notice were also mailed to individuals who have requested to be placed on the mailing list maintained by the Office of Environmental Services on <<Date>>, 2007. A proposed permit was also submitted to U.S. EPA Region VI on <<Date>>, 2007. All comments will be considered prior to a final permit decision.

PRELIMINARY DETERMINATION SUMMARY

Little Gypsy Generating Plant
Agency Interest No.: 687
Entergy Louisiana, LLC
Montz, St. Charles Parish, Louisiana
PSD-LA-720
February 26, 2007

I. APPLICANT

Entergy Louisiana, LLC
17420 River Rd
Montz, LA 70068

II. LOCATION

Little Gypsy Generating Plant is located at 17420 River Road, Montz, Louisiana. Approximate UTM coordinates are 744.82 kilometers East, 3321.75 kilometers North, zone 15.

III. PROJECT DESCRIPTION

Entergy Louisiana, LLC proposes to construct and operate two circulating fluidized bed (CFB) boilers. They will be designed to burn petroleum coke and coal. In a CFB boiler, solid fuel and a sorbent (typically limestone) are jointly fed directly to the combustion chamber. Primary air is injected from the bottom of the combustion chamber to provide combustion air as well as to fluidize the burning bed. Fluidization of the bed allows for high heat transfer rates at relatively low combustion temperatures. Because of the turbulence and velocity in the circulating bed, the fuel mixes with the bed material quickly and uniformly. Secondary air is introduced at various levels to ensure solids circulation, provide staged combustion for NOx reduction as well as control of carbon monoxide (CO) and volatile organic compounds (VOCs), and supply air for continuous combustion in the upper part of the combustion chamber.

As fuel is added to the CFB boiler, it quickly heats above its ignition point, ignites and becomes part of the burning bed. The fuel particles are entrained within the bed until they are consumed or removed either in the gas stream or with the bed ash. Entrainment of the fuel particles in the gas stream occurs when their size is in the range where the terminal and gas velocities are equal. As the fuel particle size decreases to the point that the terminal velocity is exceeded by the gas velocity, the particles are blown from the bed, collected by a particle separator, and returned to the boiler.

The addition of the two CFB Boilers will require that petroleum coke, coal, limestone, sand, ammonia, mercury sorbent, and an alkali material be stored and handled. The fuel and limestone will be delivered on-site by barge and will be stored in three storage piles that are planned for the site. Sand, alkali material, mercury sorbent, and ammonia will be transported to the site via truck and stored in tanks or silos, as appropriate. These materials will be transported throughout the site via conveyors, pipes, trucks, or other means as appropriate. The transportation network necessary to convey these materials will be constructed and operated as part of this modification.

This project will require the addition of the following sources:

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- Two CFB Boilers (EQT 11 and EQT 12)
- Two Activated Carbon Silos (EQT 13 and EQT 14)
- Three Bed Ash Silos (EQT 15, EQT 16, and EQT 20)
- Two Fly Ash Silos (EQT 19 and EQT 22)
- Two Lime Silos (EQT 22 and EQT 23)
- Assorted conveyors and storage piles

Estimated emissions, in tons per year, are as follows:

Pollutant	Baseline Actual Emissions	Projected Actual Emissions/PTE	Contemporaneous Changes	Net Emissions Increase	PSD de minimis	Review required?
PM	-	294.63	- 25	269.63	25	Yes
PM_{10}	-	294.63	- 25	269.63	15	Yes
SO_2	-	3,539	- 5.5	3,533.5	40	Yes
NO_X	-	1,404	- 3,433	- 2,029	40	No
CO	-	2,359	- 702	1,657	100	Yes
VOC	-	110.9	- 46	64.9	40	Yes
H_2SO_4	-	28.3	-	28.3	7	Yes
Lead	-	0.35	-	0.35	0.6	No
HF	-	19.7	-	19.7	3.0	Yes

IV. SOURCE IMPACT ANALYSIS

A proposed net increase in the emission rate of a regulated pollutant above de minimis levels for new major or modified major stationary sources requires review under Prevention of Significant Deterioration regulations, LAC 33:III.509. PSD review entails the following analyses:

A. A determination of the Best Available Control Technology (BACT);

B. An analysis of the existing air quality and a determination of whether or not preconstruction or postconstruction monitoring will be required;

C. An analysis of the source's impact on total air quality to ensure compliance with the National Ambient Air Quality Standards (NAAQS);

D. An analysis of the PSD increment consumption;

E. An analysis of the source related growth impacts;

F. An analysis of source related growth impacts on soils, vegetation, and visibility;

G. A Class I Area impact analysis; and

H. An analysis of the impact of toxic compound emissions.

PRELIMINARY DETERMINATION SUMMARY

Little Gypsy Generating Plant
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A. BEST AVAILABLE CONTROL TECHNOLOGY

Under current PSD regulations, an analysis of "top down" BACT is required for the control of each regulated pollutant emitted from a modified major stationary source in excess of the specified significant emission rates. The top down approach to the BACT process involves determining the most stringent control technique available for a similar or identical source. If it can be shown that this level of control is infeasible based on technical, environmental, energy, and/or cost considerations, then it is rejected and the next most stringent level of control is determined and similarly evaluated. This process continues until a control level is arrived at which cannot be eliminated for any technical, environmental, or economic reason. A technically feasible control strategy is one that has been demonstrated to function efficiently on identical or similar processes. Additionally, BACT shall not result in emissions of any pollutant which would exceed any applicable standard under 40 CFR Parts 60 and 61.

For this project, BACT analyses are required for PM_{10}, SO_2, CO, VOC, H_2SO_4, and HF emissions from the Little Gypsy 3 Repowering Project. Where PM_{10} is addressed in the BACT analysis, it is assumed that particulate matter (PM) is also being considered.

<u>BACT analyses for PM/PM10</u>

3A – CFB Boiler Unit 3A (EQT 11)

The RBLC listed one possible control technology for a CFB boiler. It was a fabric filter.

Based on an analysis of the control strategies listed above, a fabric filter which limits particulate matter emissions from the CFB Boiler to 0.011 lb/MMBTU calculated on a 30-day rolling average was determined to be BACT.

3B – CFB Boiler Unit 3B (EQT 12)

The RBLC listed one possible control technology for a CFB boiler. It was a fabric filter.

Based on an analysis of the control strategies listed above, a fabric filter which limits particulate matter emissions from the CFB Boiler to 0.011 lb/MMBTU calculated on a 30-day rolling average was determined to be BACT.

AC1 – Activated Carbon Silo #1 (EQT 13)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, fabric filters are proposed as BACT for PM_{10}.

AC2 – Activated Carbon Silo #2 (EQT 14)

Standard methods exist to control particulate matter emissions during material handling operations.

These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, fabric filters are proposed as BACT for PM_{10}.

BA1A – Bed Ash Silos – Vacuum System #1 (EQT 15)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, fabric filters are proposed as BACT for PM_{10}.

BA1B – Bed Ash Silos – Vacuum System #2 (EQT 16)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, fabric filters are proposed as BACT for PM_{10}.

CT1 – Cooling Tower (EQT 18)

Drift eliminators are the standard method to control particulate matter emissions from cooling towers. Particulate matter emissions occur from a cooling tower as a result of the total solids in the water being entrained in the air stream. These droplets of water are known as drift. Drift eliminators are designed to remove as many droplets as possible before the air stream and entrained particulate leave the cooling tower.

Based on an analysis of the control strategies listed above, a drift eliminator with 99.999% control efficiency is proposed as BACT for PM_{10}.

FA1A – Fly Ash Baghouse Vent – Silo 1 (EQT 19)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, fabric filters are proposed as BACT for PM_{10}.

BA1C – Bed Ash Silos – Bin Vent Filter System (EQT 20)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, fabric filters are proposed as BACT for PM_{10}.

FA1B – Fly Ash Baghouse Vent – Silo 2 (EQT 21)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, fabric filters are proposed as BACT for PM_{10}.

LS1 – Lime Silo #1 (EQT 22)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, fabric filters are proposed as BACT for PM_{10}.

LS2 – Lime Silo #2 (EQT 23)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, fabric filters are proposed as BACT for PM_{10}.

BA2 – Bed Ash Unloading to Trucks via Telescoping Chute (FUG 1)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, a closed vent system that vents back into the ash silo is proposed as BACT for PM_{10}.

BA3A – Bed Ash Loading to Landfill Trucks via Telescoping Chute - #1 (FUG 2)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, a closed vent system that vents back into the ash silo is proposed as BACT for PM_{10}.

BA3B – Bed Ash Loading to Landfill Trucks via Telescoping Chute - #2 (FUG 3)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, a closed vent system that vents back into the ash silo is proposed as BACT for PM_{10}.

BA4 – Bed Ash Unloading to Landfill (FUG 4)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, best operating practices are proposed as BACT for PM_{10}.

FA2A – Fly Ash Loading to Trucks via Telescoping Chute – Silo 1 (FUG 5)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, a closed vent system that vents back into the ash silo is proposed as BACT for PM_{10}.

FA2B – Fly Ash Loading to Trucks via Telescoping Chute – Silo 2 (FUG 6)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, a closed vent system that vents back into the ash silo is proposed as BACT for PM_{10}.

PRELIMINARY DETERMINATION SUMMARY

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FA3A – Fly Ash Loading to Landfill Trucks via Telescoping Chute – Silo 1 (FUG 7)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, a closed vent system that vents back into the ash silo is proposed as BACT for PM_{10}.

FA3B – Fly Ash Loading to Landfill Trucks via Telescoping Chute – Silo 1 (FUG 8)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, a closed vent system that vents back into the ash silo is proposed as BACT for PM_{10}.

FA4 – Fly Ash Unloading to Landfill (FUG 9)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, best operating practices are proposed as BACT for PM_{10}.

FUG1 – Raw Material Handling Conveyors (FUG 10)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, wind screens and wet suppression are proposed as BACT for PM_{10}.

FUG2 – Petroleum Coke Pile Fugitive Emissions (FUG 11)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

For storage piles, total enclosure of the pile within a dome is also a technically feasible control technology that affords the greatest degree of control. However, this option was rejected as being economically infeasible.

Based on an analysis of the control strategies listed above, dust suppression is proposed as BACT for PM_{10}.

FUG3 – Coal Pile Fugitive Emissions (FUG 12)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

For storage piles, total enclosure of the pile within a dome is also a technically feasible control technology that affords the greatest degree of control. However, this option was rejected as being economically infeasible.

Based on an analysis of the control strategies listed above, dust suppression is proposed as BACT for PM_{10}.

FUG4 – Limestone Storage Pile Fugitive Emissions (FUG 13)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

For storage piles, total enclosure of the pile within a dome is also a technically feasible control technology that affords the greatest degree of control. However, this option was rejected as being economically infeasible.

Based on an analysis of the control strategies listed above, dust suppression is proposed as BACT for PM_{10}.

FUG5 – Fly Ash Pile Fugitive Emissions (FUG 14)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

For storage piles, total enclosure of the pile within a dome is also a technically feasible control technology that affords the greatest degree of control. However, this option was rejected as being economically infeasible.

Based on an analysis of the control strategies listed above, dust suppression is proposed as BACT for PM_{10}.

FUG6 – Fugitive Dust from Paved Roads (FUG 15)

Paving of all newly constructed roads and application of dust suppressant to any existing unpaved roads that experience traffic from material handling operations are proposed as BACT for PM_{10}.

TP1 – Transfer Point – Barge Unloader (FUG 17)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, wet suppression in conjunction with wind screens is proposed as BACT for PM_{10}.

TP2 – Transfer Point – Unloading Hopper to Barge Unloading Conveyor (FUG 18)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, wet suppression is proposed as BACT for PM_{10}.

TP3 – Transfer Point – Barge Unloading Conveyor to Unloading Transfer Conveyor (FUG 19)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, wet suppression is proposed as BACT for PM_{10}.

TP4 – Transfer Point – Unloading Transfer Conveyor to the Storage Container (FUG 20)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, wet suppression is proposed as BACT for PM_{10}.

TP5 – Transfer Point – Storage Conveyor to the Stacker Conveyor (FUG 21)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, wet suppression is proposed as BACT for PM_{10}.

TP6 – Transfer Point – Stacker Conveyor to Storage Piles (FUG 22)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, wet suppression is proposed as BACT for PM_{10}.

TP7A – Transfer Point – Petroleum Coke Reclaim from Storage Piles (FUG 23)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, wet suppression is proposed as BACT for PM_{10}.

TP7B – Transfer Point – Coal/Limestone Reclaim from Storage Piles (FUG 24)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, wet suppression is proposed as BACT for PM_{10}.

TP8 – Transfer Point – Emergency Reclaim from Limestone Storage Pile (FUG 25)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, wet suppression is proposed as BACT for PM_{10}.

TP9 – Coke Reclaim Transfer Tower – Dust Collection (FUG 26)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, fabric filters are proposed as BACT for PM_{10}.

TP10 – Coal/Limestone Reclaim Transfer Tower – Dust Collection (FUG 27)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, fabric filters are proposed as BACT for PM_{10}.

TP11 – Diverter Transfer Tower – Dust Suppression System (FUG 28)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, fabric filters are proposed as BACT for PM_{10}.

TP12 – Crusher Tower – Dust Collection System (FUG 29)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, fabric filters are proposed as BACT for PM_{10}.

T138 – Transfer Point – Plant Conveyors to Tripper Deck (FUG 30)

Standard methods exist to control particulate matter emissions during material handling operations. These control methods include fabric filters, wind screens, wet suppression, enclosures, telescopic chutes, and water sprays.

Based on an analysis of the control strategies listed above, wet suppression is proposed as BACT for PM_{10}.

BACT analyses for SO_2, Sulfuric Acid, and Fluorides (HF)

3A – CFB Boiler Unit 3A (EQT 11)

This source must address BACT for SO_2, sulfuric acid, and HF because SO_2, sulfuric acid, and HF emissions will experience a significant increase as a result of the proposed project. The RBLC listed three possible control technologies for a CFB boiler. They are circulating fluidized bed technology, wet flue gas desulfurization, and dry flue gas desulfurization. Though it was not listed in the RBLC, fuel washing and fuel switching were also analyzed.

Fuel washing is used to remove any inorganic sulfur impurities that may be contained in the fuel. Fuel washing is not feasible for this project. Petroleum coke, bagasse, and non-chemically treated wood do not contain significant amounts of inorganic sulfur. Any sulfur contained in these fuels is organic sulfur and can not be removed by washing. Performing fuel washing on coal reduces the economic efficiency of the boiler as more heat would be needed to evaporate the water entrained in the coal. In addition, it is intended for this boiler to be able to burn coals that come from various sources and with varying sulfur contents. It would be very difficult to determine the correct level of washing necessary for each coal variety.

Wet flue gas desulfurization (wet FGD) uses a lime or limestone slurry as a scrubbing liquid. This liquid is sprayed into an absorber, where the lime or limestone reacts with the SO_2 and thereby removes it from the air stream. The resulting slurry must be dewatered in ponds and landfills prior to disposal. There has been no application of this technology with this type of boiler and, as such, wet FGD was not determined to be feasible.

Based on economic and energy impacts analyses of the control strategies listed above, circulating fluidized bed technology with dry flue gas desulfurization which limit SO_2 emissions from the CFB Boiler to 0.15 lb/MMBTU calculated on a 30-day rolling average, sulfuric acid emissions to 0.0012 lb/MMBTU calculated on a 30-day rolling average, and HF emissions to 0.00084 lb/MMBTU calculated on a 30-day rolling average were determined to be BACT.

3B – CFB Boiler Unit 3B (EQT 12)

PRELIMINARY DETERMINATION SUMMARY

Little Gypsy Generating Plant
Agency Interest No.: 687
Entergy Louisiana, LLC
Montz, St. Charles Parish, Louisiana
PSD-LA-720
February 26, 2007

This source must address BACT for SO_2, sulfuric acid, and HF because SO_2, sulfuric acid, and HF emissions will experience a significant increase as a result of the proposed project. The RBLC listed three possible control technologies for a CFB boiler. They are circulating fluidized bed technology, wet flue gas desulfurization, and dry flue gas desulfurization. Though it was not listed in the RBLC, fuel washing and fuel switching were also analyzed.

Fuel washing is used to remove any inorganic sulfur impurities that may be contained in the fuel. Fuel washing is not feasible for this project. Petroleum coke, bagasse, and non-chemically treated wood do not contain significant amounts of inorganic sulfur. Any sulfur contained in these fuels is organic sulfur and can not be removed by washing. Performing fuel washing on coal reduces the economic efficiency of the boiler as more heat would be needed to evaporate the water entrained in the coal. In addition, it is intended for this boiler to be able to burn coals that come from various sources and with varying sulfur contents. It would be very difficult to determine the correct level of washing necessary for each coal variety.

Wet flue gas desulfurization (wet FGD) uses a lime or limestone slurry as a scrubbing liquid. This liquid is sprayed into an absorber, where the lime or limestone reacts with the SO_2 and thereby removes it from the air stream. The resulting slurry must be dewatered in ponds and landfills prior to disposal. There has been no application of this technology with this type of boiler and, as such, wet FGD was not determined to be feasible.

Based on economic and energy impacts analyses of the control strategies listed above, circulating fluidized bed technology with dry flue gas desulfurization which limit SO_2 emissions from the CFB Boiler to 0.15 lb/MMBTU calculated on a 30-day rolling average, sulfuric acid emissions to 0.0012 lb/MMBTU calculated on a 30-day rolling average, and HF emissions to 0.00084 lb/MMBTU calculated on a 30-day rolling average were determined to be BACT.

BACT analyses for CO

3A – CFB Boiler Unit 3A (EQT 11)

This source must address BACT for CO because CO emissions will experience a significant increase as a result of the proposed project. The RBLC listed two possible control technologies for a CFB boiler. They were circulating fluidized bed technology and good combustion practices.

Based on an analysis of the control strategies listed above, circulating fluidized bed technology and good combustion practices which limit CO emissions from the CFB Boiler to 0.10 lb/MMBTU calculated on a 30-day rolling average when operating at greater than or equal to sixty percent of the maximum steam capacity output and 0.15 lb/MMBTU calculated on a 30-day rolling average when operating at less than sixty percent of the maximum steam capacity output were determined to be BACT.

3B – CFB Boiler Unit 3B (EQT 12)

This source must address BACT for CO because CO emissions will experience a significant increase as a result of the proposed project. The RBLC listed two possible control technologies for a CFB boiler. They were circulating fluidized bed technology and good combustion practices.

Based on an analysis of the control strategies listed above, circulating fluidized bed technology and good combustion practices which limit CO emissions from the CFB Boiler to 0.10 lb/MMBTU calculated on a 30-day rolling average when operating at greater than or equal to sixty percent of the maximum steam capacity output and 0.15 lb/MMBTU calculated on a 30-day rolling average when operating at less than sixty percent of the maximum steam capacity output were determined to be BACT.

BACT analyses for VOC

3A – CFB Boiler Unit 3A (EQT 11)

This source must address BACT for VOC because VOC emissions will experience a significant increase as a result of the proposed project. The RBLC listed two possible control technologies for a CFB boiler. They were circulating fluidized bed technology and good combustion practices.

Based on an analysis of the control strategies listed above, circulating fluidized bed technology and good combustion practices which limit VOC emissions from the CFB Boiler to 0.0047 lb/MMBTU calculated on a 30-day rolling average were determined to be BACT.

3B – CFB Boiler Unit 3B (EQT 12)

This source must address BACT for VOC because VOC emissions will experience a significant increase as a result of the proposed project. The RBLC listed two possible control technologies for a CFB boiler. They were circulating fluidized bed technology and good combustion practices.

Based on an analysis of the control strategies listed above, circulating fluidized bed technology and good combustion practices which limit VOC emissions from the CFB Boiler to 0.0047 lb/MMBTU calculated on a 30-day rolling average were determined to be BACT.

A summary of BACT costs for technologies eliminated for economic reasons is presented in Table I.

B. ANALYSIS OF EXISTING AIR QUALITY

Prevention of Significant Deterioration regulations require an analysis of existing air quality for those pollutants to be emitted in significant amounts from a proposed major modification. PM_{10}, SO_2, and CO are pollutants of concern in this case.

ISCST3 modeling of CO emissions from the proposed project indicates that the maximum offsite ground level concentrations will be below PSD significance levels and preconstruction monitoring levels. Therefore, pre-construction monitoring and refined NAAQS modeling were not required.

However, the model predicted that PM_{10} and SO_2 emissions would exceed their respective significance levels and the preconstruction monitoring levels for the 3-hour (SO_2) and 24-hour (PM_{10} and SO_2) averaging periods; consequently, refined NAAQS modeling, increment consumption analyses, and preconstruction monitoring were required. The River Region ambient air monitoring network was able to provide sufficient data to satisfy the preconstruction monitoring requirement.

The net increase in VOC emissions is less than 100 TPY; therefore, an ambient analysis is not required for ozone.

C. NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) ANALYSIS

The Little Gypsy 3 Repowering Project modeling predicted concentrations will be compliant with National Ambient Air Quality Standards (NAAQS). The predicted project emission concentrations were significant for SO_2 (3-hour and 24-hour averaging periods) and PM_{10} (24-hour averaging period). NAAQS limits were not exceeded at any significant receptors.

D. PSD INCREMENT ANALYSIS

Because the maximum modeled PM_{10} and SO_2 impact exceeded their respective PSD significance level, a determination of PSD increment consumption was required. Modeling demonstrates compliance with the allowable Class II PSD increment limits for PM_{10} and SO_2.

A summary of the air quality analyses is also presented in Table II.

E. SOURCE RELATED GROWTH IMPACTS

Operation of this facility is not expected to have any significant effect on residential growth or industrial/commercial development in the area of the facility. No significant net change in employment, population, or housing will be associated with the project. As a result, there will not be any significant increases in pollutant emissions indirectly associated with Entergy Louisiana LLC's proposal. Secondary growth effects will include an estimated 600 temporary construction related jobs and approximately 57 permanent jobs.

F. SOILS, VEGETATION, AND VISIBILITY IMPACTS

There will be no significant impact on area soils, vegetation, or visibility.

G. CLASS I AREA IMPACTS

Louisiana's Breton Wildlife Refuge, the nearest Class I area, is over 100 kilometers from the site, precluding any significant impact.

H. *TOXIC EMISSIONS IMPACT*

The selection of control technology based on the BACT analysis included consideration of control of toxic emissions.

V. CONCLUSION

The Air Permits Division has made a preliminary determination to approve the construction of the Little Gypsy 3 Repowering Project at the Little Gypsy Generating Plant near Montz, in St. Charles Parish, Louisiana, subject to the attached specific and general conditions. In the event of a discrepancy in the provisions found in the application and those in this Preliminary Determination Summary, the Preliminary Determination Summary shall prevail.

SPECIFIC CONDITIONS

Little Gypsy Generating Plant
Agency Interest No.: 687
Entergy Louisiana LLC
Montz, St. Charles Parish, Louisiana
PSD-LA-720

1. The permittee is authorized to operate in conformity with the specifications submitted to the Louisiana Department of Environmental Quality (LDEQ) as analyzed in LDEQ's document entitled "Preliminary Determination Summary" dated February 26, 2007, and subject to the following emissions limitations and other specified conditions. Specifications submitted are contained in the application and Emission Inventory Questionnaire dated September 5, 2006, along with supplemental information dated October 20, 2006 and December 12, 2006.

MAXIMUM ALLOWABLE EMISSIONS RATES

ID No.	Description		PM_{10}	SO_2	CO	VOC	Sulfuric Acid	Fluorides (HF)
EQT 11	CFB Boiler Unit 3A (3A)	lb/MM Btu	0.011 -	0.15 -	0.10 *0.15	0.0047 -	0.0012 -	0.00084 -
		lb/hr	31.11	2279.12	403.98	14.14	3.393	2.245
		TPY	129.76	1761.85	1177.90	55.44	14.155	9.835
EQT 12	CFB Boiler Unit 3B (3B)	lb/MM Btu	0.011 -	0.15 -	0.10 *0.15	0.0047 -	0.0012 -	0.00084 -
		lb/hr	31.11	2279.12	403.98	14.14	3.393	2.245
		TPY	129.76	1761.85	1177.90	55.44	14.155	9.835
EQT 13	Activated Carbon Silo #1 (AC1)	lb/hr TPY	0.12 0.02	- -	- -	- -	- -	- -
EQT 14	Activated Carbon Silo #2 (AC2)	lb/hr TPY	0.12 0.02	- -	- -	- -	- -	- -
EQT 15	Bed Ash Silos – Vacuum System #1 (BA1A)	lb/hr TPY	0.001 0.003	- -	- -	- -	- -	- -
EQT 16	Bed Ash Silos – Vacuum System #2 (BA1B)	lb/hr TPY	0.001 0.003	- -	- -	- -	- -	- -
EQT 18	Cooling Tower (CT1)	lb/hr TPY	0.05 0.13	- -	- -	- -	- -	- -
EQT 19	Fly Ash Baghouse Vent – Silo 1 (FA1A)	lb/hr TPY	0.38 1.67	- -	- -	- -	- -	- -
EQT 20	Bed Ash Silos – Bin Vent Filter System (BA1C)	lb/hr TPY	0.001 0.004	- -	- -	- -	- -	- -
EQT 21	Fly Ash Baghouse Vent – Silo 2 (FA1B)	lb/hr TPY	0.38 1.67	- -	- -	- -	- -	- -
EQT 22	Lime Silo #1 (LS1)	lb/hr TPY	0.28 0.28	- -	- -	- -	- -	- -
EQT 23	Lime Silo #2 (LS2)	lb/hr TPY	0.28 0.28	- -	- -	- -	- -	- -
FUG 1	Bed Ash Unloading to Trucks via Telescoping Chute (BA2)	lb/hr TPY	3.49 0.71	- -	- -	- -	- -	- -
FUG 2	Bed Ash Loading to Landfill Trucks via Telescoping Chute - #1 (BA3A)	lb/hr TPY	0.01 0.01	- -	- -	- -	- -	- -
FUG 3	Bed Ash Loading to Landfill Trucks via Telescoping Chute - #2 (BA3B)	lb/hr TPY	0.01 0.01	- -	- -	- -	- -	- -
FUG 4	Bed Ash Unloading to Landfill	lb/hr	1.05	-	-	-	-	-

SPECIFIC CONDITIONS

Little Gypsy Generating Plant
Agency Interest No.: 687
Entergy Louisiana LLC
Montz, St. Charles Parish, Louisiana
PSD-LA-720

MAXIMUM ALLOWABLE EMISSIONS RATES

ID No.	Description		PM_{10}	SO_2	CO	VOC	Sulfuric Acid	Fluorides (HF)
	(BA4)	TPY	0.11	-	-	-	-	-
FUG 5	Fly Ash Loading to Trucks via Telescoping Chute – Silo 1 (FA2A)	lb/hr TPY	3.49 1.06	- -	- -	- -	- -	- -
FUG 6	Fly Ash Loading to Trucks via Telescoping Chute – Silo 2 (FA2B)	lb/hr TPY	3.49 1.06	- -	- -	- -	- -	- -
FUG 7	Fly Ash Loading to Landfill Trucks via Telescoping Chute – Silo 1 (FA3A)	lb/hr TPY	0.11 0.03	- -	- -	- -	- -	- -
FUG 8	Fly Ash Loading to Landfill Trucks via Telescoping Chute – Silo 2 (FA3B)	lb/hr TPY	0.11 0.03	- -	- -	- -	- -	- -
FUG 9	Fly Ash Unloading to landfill (FA4)	lb/hr TPY	2.11 0.15	- -	- -	- -	- -	- -
FUG 10	Raw Material Handling Conveyors (FUG1)	lb/hr TPY	37.42 2.42	- -	- -	- -	- -	- -
FUG 11	Petroleum Coke Pile Fugitive Emissions (FUG2)	lb/hr TPY	187.47 2.16	- -	- -	- -	- -	- -
FUG 12	Coal Pile Fugitive Emissions (FUG3)	lb/hr TPY	129.41 2.04	- -	- -	- -	- -	- -
FUG 13	Limestone Storage Pile Fugitive Emissions (FUG4)	lb/hr TPY	170.58 1.82	- -	- -	- -	- -	- -
FUG 14	Fly Ash Pile Fugitive Emissions (FUG5)	lb/hr TPY	25.11 0.22	- -	- -	- -	- -	- -
FUG 15	Haul Road Fugitive Dust Emissions (FUG6)	lb/hr TPY	4.07 17.20	- -	- -	- -	- -	- -
FUG 17	Transfer Point – Barge Unloader (TP1)	lb/hr TPY	1.65 0.08	- -	- -	- -	- -	- -
FUG 18	Transfer Point – Unloading Hopper to Barge Unloading Conveyor (TP2)	lb/hr TPY	1.65 0.08	- -	- -	- -	- -	- -
FUG 19	Transfer Point – Barge Unloading Conveyor to Unloading Transfer Conveyor (TP3)	lb/hr TPY	1.65 0.08	- -	- -	- -	- -	- -
FUG 20	Transfer Point – Unloading Transfer Conveyor to the Storage Container (TP4)	lb/hr TPY	0.82 0.05	- -	- -	- -	- -	- -
FUG 21	Transfer Point – Storage Conveyor to Stacker Conveyor (TP5)	lb/hr TPY	4.11 0.18	- -	- -	- -	- -	- -
FUG 22	Transfer Point – Stacker Conveyor to Storage Piles (TP6)	lb/hr TPY	4.11 0.18	- -	- -	- -	- -	- -
FUG 23	Transfer Point – Petroleum Coke Reclaim from Storage	lb/hr TPY	1.38 0.22	- -	- -	- -	- -	- -

SPECIFIC CONDITIONS

Little Gypsy Generating Plant
Agency Interest No.: 687
Entergy Louisiana LLC
Montz, St. Charles Parish, Louisiana
PSD-LA-720

MAXIMUM ALLOWABLE EMISSIONS RATES

ID No.	Description		PM_{10}	SO_2	CO	VOC	Sulfuric Acid	Fluorides (HF)
	Piles (TP7A)							
FUG 24	Transfer Point – Coal/Limestone Reclaim from Storage Piles (TP7B)	lb/hr TPY	6.37 0.99	- -	- -	- -	- -	- -
FUG 25	Transfer Point – Emergency Reclaim from Limestone Storage Pile (TP8)	lb/hr TPY	0.15 0.16	- -	- -	- -	- -	- -
FUG 26	Coke Reclaim Transfer Tower – Dust Collection	lb/hr TPY	0.004 0.01	- -	- -	- -	- -	- -
FUG 27	Coal/Limestone Reclaim Transfer Tower – Dust Collection (TP10)	lb/hr TPY	0.004 0.01	- -	- -	- -	- -	- -
FUG 28	Diverter Transfer Tower – Dust Suppression System (TP11)	lb/hr TPY	0.01 0.02	- -	- -	- -	- -	- -
FUG 29	Crusher Tower – Dust Collection System (TP12)	lb/hr TPY	0.14 0.38	- -	- -	- -	- -	- -
FUG 30	Transfer Point – Plant Conveyors to Tripper Deck (TP13)	lb/hr TPY	0.02 0.06	- -	- -	- -	- -	- -

*Applies when unit operates at less than 60 percent of its maximum steam production output capacity.

LOUISIANA AIR EMISSION PERMIT
GENERAL CONDITIONS

I. This permit is issued on the basis of the emissions reported in the application for approval of emissions and in no way guarantees that the design scheme presented will be capable of controlling the emissions to the type and quantities stated. Failure to install, properly operate and/or maintain all proposed control measures and/or equipment as specified in the application and supplemental information shall be considered a violation of the permit and LAC 33:III.501. If the emissions are determined to be greater than those allowed by the permit (e.g. during the shakedown period for new or modified equipment) or if proposed control measures and/or equipment are not installed or do not perform according to design efficiency, an application to modify the permit must be submitted. All terms and conditions of this permit shall remain in effect unless and until revised by the permitting authority.

II. The permittee is subject to all applicable provisions of the Louisiana Air Quality Regulations. Violation of the terms and conditions of the permit constitutes a violation of these regulations.

III. The Emission Rates for Criteria Pollutants, Emission Rates for TAP/HAP & Other Pollutants, and Specific Requirements sections or, where included, Emission Inventory Questionnaire sheets establish the emission limitations and are a part of the permit. Any operating limitations are noted in the Specific Requirements or, where included, Tables 2 and 3 of the permit. The synopsis is based on the application and Emission Inventory Questionnaire dated September 5, 2006, along with supplemental information dated October 20, 2006, and December 12, 2006.

IV. This permit shall become invalid, for the sources not constructed, if:

A. Construction is not commenced, or binding agreements or contractual obligations to undertake a program of construction of the project are not entered into, within two (2) years (18 months for PSD permits) after issuance of this permit, or;

B. If construction is discontinued for a period of two (2) years (18 months for PSD permits) or more.

The administrative authority may extend this time period upon a satisfactory showing that an extension is justified.

This provision does not apply to the time period between construction of the approved phases of a phased construction project. However, each phase must commence construction within two (2) years (18 months for PSD permits) of its projected and approved commencement date.

V. The permittee shall submit semiannual reports of progress outlining the status of construction, noting any design changes, modifications or alterations in the construction schedule which have or may have an effect on the emission rates or ambient air quality levels. These reports shall continue to be submitted until such time as construction is certified as being complete. Furthermore, for any significant change in the design, prior approval shall be obtained from the Office of Environmental Services, Air Permits Division.

VI. The permittee shall notify the Department of Environmental Quality, Office of Environmental Services, Air Permits Division within ten (10) calendar days from the date that construction is certified as complete and the estimated date of start-up of operation. The appropriate Regional Office shall also be so notified within the same time frame.

VII. Any emissions testing performed for purposes of demonstrating compliance with the limitations set forth in paragraph III shall be conducted in accordance with the methods described in the Specific Conditions and, where included, Tables 1, 2, 3, 4, and 5 of this permit. Any deviation from or modification of the methods used for testing shall have prior approval from the Office of Environmental Assessment, Air Quality Assessment Division.

LOUISIANA AIR EMISSION PERMIT
GENERAL CONDITIONS

VIII. The emission testing described in paragraph VII above, or established in the specific conditions of this permit, shall be conducted within sixty (60) days after achieving normal production rate or after the end of the shakedown period, but in no event later than 180 days after initial start-up (or restart-up after modification). The Office of Environmental Assessment, Air Quality Assessment Division shall be notified at least (30) days prior to testing and shall be given the opportunity to conduct a pretest meeting and observe the emission testing. The test results shall be submitted to the Air Quality Assessment Division within sixty (60) days after the complete testing. As required by LAC 33:III.913, the permittee shall provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits.

IX. The permittee shall, within 180 days after start-up and shakedown of each project or unit, report to the Office of Environmental Compliance, Enforcement Division any significant difference in operating emission rates as compared to those limitations specified in paragraph III. This report shall also include, but not be limited to, malfunctions and upsets. A permit modification shall be submitted, if necessary, as required in Condition I.

X. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of at least five (5) years.

XI. If for any reason the permittee does not comply with, or will not be able to comply with, the emission limitations specified in this permit, the permittee shall provide the Office of Environmental Compliance, Enforcement Division with a written report as specified below.

A. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33.I.Chapter 39.

B. A written report shall be submitted within 7 days of the initial occurrence of any emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.

C. A written report shall be submitted quarterly to address all emission limitation exceedances not included in paragraphs A or B above. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any emission limitation exceedances occurring during the corresponding specified calendar quarter:

1. Report by June 30 to cover January through March
2. Report by September 30 to cover April through June
3. Report by December 31 to cover July through September
4. Report by March 31 to cover October through December

D. Each report submitted in accordance with this condition shall contain the following information:

1. Description of noncomplying emission(s);
2. Cause of noncompliance;
3. Anticipated time the noncompliance is expected to continue, or if corrected, the duration of the period of noncompliance;
4. Steps taken by the permittee to reduce and eliminate the noncomplying emissions; and
5. Steps taken by the permittee to prevent recurrences of the noncomplying emissions.

E. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided all information specified above is included. For Part 70 sources, reports submitted in accordance with Part 70 General Condition R shall serve to meet the requirements of this condition provided all specified information is included. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107.

XII. Permittee shall allow the authorized officers and employees of the Department of Environmental Quality, at all reasonable times and upon presentation of identification, to:

A. Enter upon the permittee's premises where regulated facilities are located, regulated activities are conducted or where records required under this permit are kept;

B. Have access to and copy any records that are required to be kept under the terms and conditions of this permit, the Louisiana Air Quality Regulations, or the Act;

C. Inspect any facilities, equipment (including monitoring methods and an operation and maintenance inspection), or operations regulated under this permit; and

D. Sample or monitor, for the purpose of assuring compliance with this permit or as otherwise authorized by the Act or regulations adopted thereunder, any substances or parameters at any location.

XIII. If samples are taken under Section XII.D. above, the officer or employee obtaining such samples shall give the owner, operator or agent in charge a receipt describing the sample obtained. If requested prior to leaving the premises, a portion of each sample equal in volume or weight to the portion retained shall be given to the owner, operator or agent in charge. If an analysis is made of such samples, a copy of the analysis shall be furnished promptly to the owner, operator or agency in charge.

XIV. The permittee shall allow authorized officers and employees of the Department of Environmental Quality, upon presentation of identification, to enter upon the permittee's premises to investigate potential or alleged violations of the Act or the rules and regulations adopted thereunder. In such investigations, the permittee shall be notified at the time entrance is requested of the nature of the suspected violation. Inspections under this subsection shall be limited to the aspects of alleged violations. However, this shall not in any way preclude prosecution of all violations found.

XV. The permittee shall comply with the reporting requirements specified under LAC 33:III.919 as well as notification requirements specified under LAC 33:III.927.

XVI. In the event of any change in ownership of the source described in this permit, the permittee and the succeeding owner shall notify the Office of Environmental Services, Air Permits Division, within ninety (90) days after the event, to amend this permit.

XVII. Very small emissions to the air resulting from routine operations, that are predictable, expected, periodic, and quantifiable and that are submitted by the permitted facility and approved by the Air Permits Division are considered authorized discharges. Approved activities are noted in the General Condition XVII Activities List of this permit. To be approved as an authorized discharge, these very small releases must:

1. Generally be less than 5 TPY
2. Be less than the minimum emission rate (MER)
3. Be scheduled daily, weekly, monthly, etc., or
4. Be necessary prior to plant startup or after shutdown [line or compressor

pressuring/depressuring for example]

These releases are not included in the permit totals because they are small and will have an insignificant impact on air quality. This general condition does not authorize the maintenance of a nuisance, or a danger to public health and safety. The permitted facility must comply with all applicable requirements, including release reporting under LAC 33:I.3901.

XVIII. Provisions of this permit may be appealed in writing pursuant to La. R.S. 30:2024(A) within 30 days from receipt of the permit. Only those provisions specifically appealed will be suspended by a request for hearing, unless the secretary or the assistant secretary elects to suspend other provisions as well. Construction cannot proceed except as specifically approved by the secretary or assistant secretary. A request for hearing must be sent to the following:

Attention: Office of the Secretary, Legal Services Division
La. Dept. of Environmental Quality
Post Office Box 4302
Baton Rouge, Louisiana 70821-4302

XIX. Certain Part 70 general conditions may duplicate or conflict with state general conditions. To the extent that any Part 70 conditions conflict with state general conditions, then the Part 70 general conditions control. To the extent that any Part 70 general conditions duplicate any state general conditions, then such state and Part 70 provisions will be enforced as if there is only one condition rather than two conditions.

TABLE I: BACT COST SUMMARY

Little Gypsy Generating Plant
Agency Interest No.: 687
Entergy Louisiana, LLC
Montz, St. Charles Parish, Louisiana
PSD-LA-720

Control Alternatives		Availability/ Feasibility	Negative Impacts (a)	Control Efficiency	Emissions Reduction (TPY)	Capital Cost ($)	Annualized Cost ($)	Cost Effectiveness ($/ton)	Notes
FUG2 – Petroleum Coke Pile Fugitive Emissions (FUG 11)									
PM_{10}	Total Enclosure*	Yes	1	99%	21.37	$13.5 mil.	N/A	$631,727/ton	
	Wet Suppression	Yes	-	90%	19.43	N/A	N/A	N/A	
FUG3 – Coal Pile Fugitive Emissions (FUG 12)									
PM_{10}	Total Enclosure*	Yes	1	99%	20.19	$13.5 mil.	N/A	$668,648/ton	
	Wet Suppression	Yes	-	90%	18.35	N/A	N/A	N/A	
FUG4 – Limestone Storage Pile Fugitive Emissions (FUG 13)									
PM_{10}	Total Enclosure*†	Yes	1	99%	18.01	$13.5 mil.	N/A	$749,663/ton	
	Wet Suppression	Yes	-	90%	16.37	N/A	N/A	N/A	
Notes:	a) Negative impacts: 1) economic, 2) environmental, 3) energy, 4) safety								

* Total enclosure for either petroleum coke or coal storage piles requires petroleum coke, coal, and limestone domes. If these controls are taken together, the total cost per ton of pollutant removed is $226,624/ton.

† This option can be taken alone at a capital cost of $4,500,000. If this option is taken alone, the total cost per ton of pollutant removed is $249,861/ton.

TABLE II: AIR QUALITY ANALYSIS SUMMARY

Little Gypsy Generating Plant
Agency Interest No.: 687
Entergy Louisiana, LLC
Montz, St. Charles Parish, Louisiana
PSD-LA-720

Pollutant	Averaging Period	Preliminary Screening Concentration (µg/m³)	Level of Significant Impact (µg/m³)	Significant Monitoring Concentration (µg/m³)	At the Monitoring Station: Monitored Values (µg/m³)	At the Monitoring Station: Modeling results (µg/m³)	Background (µg/m³)	Maximum Modeled Concentration (µg/m³)	Modeled + Background Concentration (µg/m³)	NAAQS (µg/m³)	Modeled PSD Increment Consumption (µg/m³)	Allowable Class II PSD Increment (µg/m³)
PM_{10}	24-hour	20.66	5	10	76	22.7	53.3	73.55	126.85	150	28.86	30
SO_2	3-hour	85.51	25	-	149.1	30.83	0	631.9	631.9	1300	288.2	512
	24-hour	14.25	5	13	39.9	124.3	0	161.4	161.4	365	48.96	91
	Annual	0.68	1	-	NR	NR	NR	NR	NR	80	NR	20
NO_X	Annual	NR	1	14	NR	NR	NR	NR	NR	100	NR	25
CO	1-hour	94.95	2000	-	NR	NR	NR	NR	NR	40,000	NR	-
	8-hour	24.23	500	575	NR	NR	NR	NR	NR	10,000	NR	-
Lead	3-month	NR	-	0.1	NR	NR	NR	NR	NR	1.5	-	-

NR = Not required.